



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J. F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

Site:	<u>Martha</u>
ID #:	<u>MOD980633069</u>
Break:	<u>17.8</u>
Other:	<u>AR</u>
<u>3-4-82</u>	

0178D

March 4, 1982

Mr. James H. Thayer
Manager
Environmental Protection
General Electric Company
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201



40031396
SUPERFUND RECORDS

Dear Mr. Thayer:

Based on the results of the trial burn conducted at your facility during the week of November 30 through December 4, 1981, I hereby grant approval to General Electric Company to incinerate liquids contaminated with polychlorinated biphenyls ("PCB's") at the Pittsfield, MA facility under the authority of Section 6 of the Toxic Substances Control Act and in accordance with 40 CFR 761.40(d)(4). This approval supersedes EPA Region I's earlier, limited approval of August 19, 1980 and is subject to the conditions specified in the enclosure to this letter.

If you have any questions concerning this matter, please contact Richard Cavagnero, an Environmental Engineer in the Permits Branch at (617)223-5061 or contact me directly.

Sincerely yours,

Lester A. Sutton, P.E.

Lester A. Sutton, P.E.
Regional Administrator

cc: Commonwealth of Massachusetts Berkshire
Air Pollution Control District

Department of Health
City of Pittsfield

Commonwealth of Massachusetts
Department of Public Health

MA DEQE, Attn: Anthony Cortese, ScD, Commissioner
William Cass, Acting Director

EPA Office of Toxic Substances, Attn: William Gunter

CONDITIONS FOR INCINERATION OF LIQUID PCB'S AT
GENERAL ELECTRIC COMPANY, PITTSFIELD, MASSACHUSETTS

A. COMBUSTION CONDITIONS

- 1.) The target end temperature of the thermal oxidizer shall be set at a minimum of 2050°F (1121°C).
- 2.) The stack gas excess oxygen content shall be maintained at a minimum of 3%.
- 3.) The combustion efficiency (C.E.) shall be maintained at a minimum of 99.9% computed as follows:

$$CE = \frac{(CO_2)}{(CO_2) + (CO)} \times 100\%$$

Where (CO₂) = concentration of carbon dioxide

(CO) = concentration of carbon monoxide

- 4.) The total heat input rate to the Thermal Oxidizer shall not exceed 17 million BTU's per hour.
- 5.) The combined feed rate of PCB contaminated liquids and auxiliary fuel (if cofired) shall not exceed 2.2g.p.m.
- 6.) The chlorine content of the waste feed shall not exceed 26% by weight.

B. OPERATIONAL CONDITIONS

- 1.) PCB contaminated waste shall not be introduced into the Thermal Oxidizer unless it is operating in accordance with the Combustion Conditions #'s 1-4. This precludes PCB waste feed during startup and shutdown conditions.
- 2.) Caustic neutralized scrubber water shall be used for HCl control. When necessitated by high PCB feed concentration and corresponding HCl generation rates, the scrubber system shall be supplemented by the use of an alkali/water solution tank feed to the quench pot, in the manner demonstrated during the Trial Burn of November 30 through December 3, 1981.

The scrubber system shall achieve 99% HCl removal efficiency and the scrubber effluent shall be treated and discharged in accordance with the terms and conditions of NPDES Permit # MA0003891.

3.) The feed of PCB contaminated waste to the Thermal Oxidizer shall stop automatically when any one or more of the following conditions occur, except as noted:

- a.) The exit end temperature drops below 2000°F (1093°C).
- b.) The stack gas excess oxygen content falls below 3%.
- c.) Failure of the continuous monitors for O₂, CO, and CO₂ due to loss of adequate pressure in the sample delivery system.

4.) Upon a determination by the operator of a failure of the continuous gas monitors, in accordance with the inspection requirements of Section C.6.C., the operator shall manually shut down the flow of PCB contaminated liquids to the Thermal Oxidizer and shall not restart the PCB waste feed until the monitors are working properly. In addition, prior to restarting, the monitors shall be recalibrated in accordance with the procedures in Appendix I, and the Thermal Oxidizer must be operating in accordance with Section B.1.

5.) Only trained, General Electric Company personnel may operate the Thermal Oxidizer during the incineration of PCB's.

6.) G.E. Shall adhere to all design specifications and operating procedures stated in its application and supporting documents and may deviate from these specifications and procedures only if written authorization is provided, except where this approval requires otherwise.

C. MONITORING AND INSPECTION REQUIREMENTS

1.) The PCB contaminated waste feed rate in gpm or gph shall be continuously monitored and recorded. Prior to PCB waste feed, the contents of the feed tank shall be sampled and analyzed for PCB concentration to allow calculation of the mass feed rate of PCB's.

2.) The exit end temperature of the Thermal Oxidizer shall be continuously monitored and recorded.

3.) The stack gas concentrations of oxygen, carbon monoxide, and carbon dioxide shall be continuously monitored and recorded. The quality control procedures outlined in Appendix I must be followed to insure the continued accuracy of the continuous monitor readings.

4.) A qualified operator must be present whenever PCB's are being incinerated.

5.) Once per 8-hour shift, the operator shall monitor and record the following information:

- a.) Waste oil line pressure;
- b.) Gas monitor sample line pressure;
- c.) PCB waste oil storage tank level;
- d.) Scrubber feed solution level;
- e.) Quench section temperature;
- f.) Waste oil flowmeter totalizer readings;

6.) Once per hour, the operator shall monitor and record the following information:

- a.) Waste oil meter reading and flow rate;
- b.) Exit end temperature;
- c.) Continuous gas monitor readings;
- d.) Combustion efficiency;

D. RECORDS RETENTION/REPORTING

1.) On July 1, 1983 and on each July 1 thereafter, General Electric Company shall prepare and maintain a document including items a-d below for PCB's and PCB items handled at the facility during the previous year. The document must be retained at the facility for 5 years after the facility is no longer used for storage or incineration of PCB's and PCB items. The documents shall be available at the facility for inspection by authorized representatives of the Environmental Protection Agency. If the facility ceases to be used for PCB storage or disposal, the owner or operator of such facility shall notify the EPA Regional Administrator within 60 days that the facility has ceased storage or disposal operations. The notice shall specify where the documents that are required to be maintained by this paragraph are located. The following information shall be included in each document;

- a.) The date when any PCBs and PCB Items were received by the facility during the previous calendar year for storage or disposal, and identification of the facility and owner or operator of the facility from whom the PCBs were received;

b.) The date when any PCBs and PCB Items were disposed of at the disposal facility or transferred to another disposal or storage facility, including the identification of the specific types of PCBs and PCB Items that were stored or disposed of;

c.) A summary of the total weight in kilograms of PCBs and PCB Articles in containers and total weight of PCBs contained in PCB Transformers, that have been handled at the facility during the previous calendar year. This summary shall provide totals of the above PCBs and PCB Items which have been:

1.) Received during the year;

2.) Transferred to other facilities during the year; and

3.) Retained at the facility at the end of the year. In addition the contents of PCB Containers shall be identified. When PCB Containers and PCBs contained in a transformer are transferred to other storage or disposal facilities, the identification of the facility to which such PCBs and PCB Items were transferred shall be included in the document.

d.) Total number of any PCB Articles or PCB Equipment not in PCB Containers, received during the calendar year, transferred to other storage or disposal facilities during the calendar year, or remaining on the facility site at the end of the calendar year. The identification of the specific types of PCB Articles and PCB Equipment received, transferred, or remaining on the facility site shall be indicated. When PCB Articles and PCB Equipment are transferred to other storage or disposal facilities, the identification of the facility to which the PCB Articles and PCB Equipment were transferred must be included.

2.) General Electric Company shall collect and maintain for a period of 5 years from the date of collection the following information, in addition to the information required in paragraph 1 of this section:

a.) When PCSs are being incinerated, the following continuous and short-interval data:

1.) Rate and quantity of PCBs fed to the combustion system as required in Section C 1;

2.) Temperature of the combustion process as required in Section C 2;

3.) Stack emission product to include O_2 , CO, and CO_2 as required in Section C 3.

b.) Upon any suspension of the operation of the incinerator pursuant to Sections B3 or 4, G.E. shall prepare a document to include the date and time of the suspension and an explanation of the circumstances causing the suspension of operation. The document shall be sent to the Regional Administrator within 30 days of any such suspension.

3.) General Electric Company shall submit a report to EPA on a quarterly basis providing information on the operation of the incineration facility during any previous 3 months in which PCB's were incinerated. This report shall be due by the 20th day of April, July, October, and January and shall include:

a) The date(s), time(s), and duration of each PCB burn.

b) The data required in Section C 1.

c) The data required in Section C 2.

d) The data required in Section C 3.

The initial report is due on July 20, 1982.

4. All reports required under this approval shall be mailed to the following address:

U.S. Environmental Protection Agency
Region I
Enforcement Branch
Air Compliance Section
Room 2103
John F. Kennedy Federal Building
Boston, Massachusetts 02203
Attn: Air Compliance Clerk

E.) GENERAL CONDITIONS

1.) G.E. shall allow any duly-designated representative of EPA to inspect the G.E. incinerator and all records and testing facilities related thereto, and to take such samples as may be necessary to monitor and enforce EPA's PCB Marking and Disposal Regulations (40 CFR §761.1 et seq.). Any refusal by G.E. to allow such an inspection (as authorized by Section 11 of the Toxic Substances Control Act) shall be grounds for immediately terminating this approval.

2.) Approval for the G.E. incinerator may be revoked, modified or otherwise altered at any time when I find that evidence indicates that a violation of the conditions of this approval letter, or of 40 CFR Part 761 or other applicable rules and regulations has occurred. Furthermore, receipt of evidence that misrepresentation of any material fact has been made in the G.E. application, or that all relevant facts have not been disclosed, shall constitute sufficient cause for revocation or modification of this approval.

Lastly, receipt of evidence or any other available information which indicates that the operation of the Thermal Oxidizer may present an unreasonable risk of injury to health or the environment may result in revocation or modification of the terms of this approval.

3.) This approval will take effect immediately upon receipt and shall be for a duration of five years from the effective date.

APPENDIX I

GE CEM PLAN

Sample Conditioning

1. All three analyzers are subject to interference from water vapor, water droplets, and particulate matter. Therefore, a sample conditioning system should be employed which includes an in-stack coarse particulate filter, heated sample line(s), a moisture removal system and a fine particulate filter capable of removing all particles larger than 1 micron from the gas stream. Because of the corrosive nature of the gas stream, the heated sample lines should be of either stainless steel or teflon and should be maintained above the dew point of the gases.
2. The sample gas should be introduced to the analyzers at a constant temperature, pressure and flow rate within the range allowable for each analyzer.

Calibration Requirements and Procedures

1. Once a week, a full calibration should be performed using zero gas and three calibration gases with appropriate pollutant concentrations in the zero, mid and high range of the instrument scale employed during sample analyses. The mid-level calibration gas concentration should be approximately 50% of the span value and the high-level 90%. A calibration curve should be generated. The calibration curve should be used to correct the recorder readings of instrument response to the sample gas to actual concentration values. (If the calibration procedure indicates that the instrument response is linear over the range of interest, instrument response will equal the actual concentration values.)

2. Once each day each analyzer should be zeroed, using zero gas, and spanned, using the high range calibration gas. The 24-hour zero and span drift should be calculated. If either value exceeds the manufacturer's design specification, appropriate corrective adjustments should be made to the analyzer. If an analyzer repeatedly fails to meet this specification, the analyzer should be repaired.
3. All calibration gases should be prepared in accordance with the protocol established in Attachment I.
4. Calibrations should be performed under the same conditions of constant temperature, pressure and flow rate as the continuous sample analyses.
5. Calibration and zero gases should be introduced into the sample line as near as possible to the same entrance point as the stack gas.

System Response Time Test

For each monitor, perform the "Response Time Test Procedure" for extractive monitors as presented in Attachment II. A system response time of ≤ 15 minutes is acceptable.

Recordkeeping

An operation and maintenance log should be kept for each monitor. Data to be recorded would include:

- 1) daily zero and span drift values;
- 2) monitor inlet temperature, pressure and flow rate for each day;
- 3) a record of operational problems encountered and corrective action taken;
- 4) a record of normally required maintenance performed;
- 5) the weekly calibration curves generated;

6) all recorder charts generated while incinerating PCB liquids.

These requirements are to be imposed in addition to the recordkeeping requirements of 40 CFR 761.